

Table ES-1: Recent Trends in U.S. Greenhouse Gas Emissions and Sinks (Tg CO₂ Eq.)

Gas/Source	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
CO₂	5,003.7	4,966.2	5,062.4	5,179.3	5,272.1	5,334.4	5,514.8	5,595.4	5,614.2	5,680.7	5,883.1	5,794.8
Fossil Fuel Combustion	4,814.8	4,786.4	4,882.3	4,999.9	5,085.6	5,141.5	5,325.8	5,400.0	5,420.5	5,488.8	5,692.2	5,614.9
Iron and Steel Production	85.4	76.2	75.0	69.9	73.6	74.4	68.3	71.9	67.4	64.4	65.8	59.1
Cement Manufacture	33.3	32.5	32.8	34.6	36.1	36.8	37.1	38.3	39.2	40.0	41.2	41.4
Waste Combustion	14.1	15.7	16.3	17.1	17.8	18.5	19.4	21.2	22.5	23.9	25.4	26.9
Ammonia Manufacture & Urea												
Application	19.3	19.2	20.0	20.4	21.1	20.5	20.3	20.7	21.9	20.6	19.6	16.6
Lime Manufacture	11.2	11.0	11.4	11.6	12.1	12.8	13.5	13.7	13.9	13.5	13.3	12.9
Natural Gas Flaring	5.5	5.6	5.1	6.5	6.6	8.7	8.2	7.6	6.3	6.7	5.5	5.2
Limestone and Dolomite Use	5.5	4.8	4.8	4.9	5.6	7.0	7.6	7.1	7.3	7.7	5.8	5.3
Aluminum Production	6.3	6.4	6.3	5.8	5.1	5.3	5.6	5.6	5.8	5.9	5.4	4.1
Soda Ash Manufacture and												
Consumption	4.1	4.0	4.1	4.0	4.0	4.3	4.2	4.4	4.3	4.2	4.2	4.1
Titanium Dioxide Production	1.3	1.3	1.5	1.6	1.7	1.7	1.7	1.8	1.8	1.9	1.9	1.9
Carbon Dioxide Consumption	0.9	0.9	0.9	1.0	1.0	1.1	1.1	1.2	1.2	1.2	1.2	1.3
Ferroalloys	2.0	2.0	2.0	2.0	1.8	1.9	2.0	2.0	2.0	2.0	1.7	1.3
Land-Use Change and Forestry												
(Sink) ^a	(1,072.8)	(1,060.8)	(1,066.8)	(1,066.2)	(1,070.6)	(1,064.2)	(1,061.0)	(840.6)	(830.5)	(841.1)	(834.6)	(838.1)
International Bunker Fuels ^b	113.9	119.9	109.9	99.8	98.0	101.0	102.3	109.9	112.9	105.3	99.3	97.3
CH₄	644.0	644.0	647.2	638.5	645.4	650.0	636.8	629.5	622.7	615.5	613.4	605.9
Landfills	212.1	211.8	214.7	216.8	217.0	216.1	212.1	207.5	202.4	203.7	205.8	202.9
Natural Gas Systems	122.0	123.8	124.0	127.4	128.1	127.2	127.4	126.0	124.0	120.3	121.2	117.3
Enteric Fermentation	117.9	117.1	119.4	118.8	120.4	123.0	120.5	118.3	116.7	116.6	115.7	114.8
Coal Mining	87.1	83.9	81.8	69.7	70.3	73.5	68.4	68.1	67.9	63.7	60.9	60.7
Manure Management	31.3	33.2	32.1	32.9	35.5	36.2	34.9	36.6	39.0	38.9	38.2	38.9
Wastewater Treatment	24.1	24.4	25.0	25.3	26.0	26.6	26.8	27.3	27.7	28.2	28.3	28.3
Petroleum Systems	27.5	27.7	26.6	25.4	24.6	24.2	23.9	23.6	22.9	21.6	21.2	21.2
Rice Cultivation	7.1	7.0	7.9	7.0	8.2	7.6	7.0	7.5	7.9	8.3	7.5	7.6
Stationary Sources	8.1	8.3	8.7	8.1	8.1	8.5	8.7	7.5	7.2	7.4	7.6	7.4
Mobile Sources	5.0	4.9	5.0	4.9	4.9	4.9	4.8	4.7	4.6	4.5	4.4	4.3
Petrochemical Production	1.2	1.2	1.3	1.4	1.5	1.5	1.6	1.6	1.6	1.7	1.7	1.5
Field Burning of Agricultural Residues	0.7	0.6	0.8	0.6	0.8	0.7	0.7	0.8	0.8	0.8	0.8	0.8
Silicon Carbide Production	+	+	+	+	+	+	+	+	+	+	+	+
International Bunker Fuels ^b	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
N₂O	397.6	403.0	413.0	413.2	440.0	430.9	441.7	440.9	436.8	430.0	429.9	424.6
Agricultural Soil Management	267.5	270.6	278.3	273.6	295.7	284.1	293.2	298.2	299.2	297.0	294.6	294.3
Mobile Sources	50.6	53.0	56.2	58.6	60.4	60.9	60.7	60.3	59.7	58.8	57.5	54.8
Manure Management	16.2	16.7	16.5	16.9	16.9	16.6	17.0	17.3	17.3	17.4	17.9	18.0
Nitric Acid	17.8	17.8	18.3	18.6	19.6	19.9	20.7	21.2	20.9	20.1	19.1	17.6
Human Sewage	12.7	13.1	13.3	13.5	14.0	13.9	14.1	14.4	14.6	15.1	15.1	15.3

Stationary Combustion	12.5	12.3	12.7	12.9	13.1	13.2	13.8	13.7	13.7	13.7	14.3	14.2
Adipic Acid	15.2	14.8	13.1	14.0	15.0	17.2	17.0	10.3	6.0	5.5	6.0	4.9
N ₂ O Product Usage	4.3	4.2	3.9	4.5	4.5	4.5	4.5	4.8	4.8	4.8	4.8	4.8
Field Burning of Agricultural Residues	0.4	0.4	0.4	0.3	0.5	0.4	0.4	0.4	0.5	0.4	0.5	0.5
Waste Combustion	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2
<i>International Bunker Fuels^b</i>	1.0	1.0	0.9	0.9	0.9	0.9	0.9	1.0	1.0	0.9	0.9	0.9
HFCs, PFCs, and SF₆	94.4	88.6	90.3	95.2	93.9	99.5	113.6	116.8	127.6	120.3	121.0	111.0
Substitution of Ozone Depleting Substances	0.9	0.8	1.5	5.2	8.4	21.7	30.4	37.7	44.5	50.9	57.3	63.7
HCFC-22 Production	35.0	30.8	34.9	31.8	31.6	27.0	31.1	30.0	40.2	30.4	29.8	19.8
Electrical Transmission and Distribution	32.1	33.4	31.1	35.1	32.4	27.5	27.7	25.2	20.9	16.4	15.4	15.3
Semiconductor Manufacture	2.9	2.9	2.9	3.6	3.9	5.9	5.4	6.5	7.3	7.7	7.4	5.5
Aluminum Production	18.1	15.7	14.5	13.9	12.2	11.8	12.5	11.0	9.0	8.9	7.9	4.1
Magnesium Production and Processing	5.4	5.1	5.4	5.5	5.4	5.6	6.5	6.3	5.8	6.0	3.2	2.5
Total	6,139.6	6,101.8	6,212.9	6,326.2	6,451.4	6,514.9	6,707.0	6,782.6	6,801.3	6,849.5	7,047.4	6,936.2
Net Emissions (Sources and Sinks)	5,066.8	5,041.0	5,146.1	5,259.9	5,380.8	5,450.7	5,646.0	5,942.0	5,970.9	6,008.5	6,212.7	6,098.1

+ Does not exceed 0.05 Tg CO₂ Eq.

^a For the most recent years, a portion of the sink estimate is based on historical and projected data; see Chapter 6, Table 6-1 for a complete breakdown. Parentheses indicate negative values (or sequestration).

^b Emissions from International Bunker Fuels are not included in totals.

Note: Totals may not sum due to independent rounding.